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## QUIZZES

Practice Test-1 (Aldehydes and Ketones)



10 Questions



7 min

### Topics

Nomenclature and structure of aldehydes and ketones., Preparation of aldehydes and ketones, Reactivity of aldehydes and ketones and their comparison

Start Quiz

SAEED MDCAT TEAM



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06 : 59



1/10



7 min



Hint

Q : Ketones are prepared by the oxidation of:

A

Primary alcohols

B

Tertiary alcohols

C

Secondary alcohols

D

All of these

**SAEED MDCAT**

**SAEED MDCAT TEAM**



**SAEEDMDCAT**

1

2

3

4

5

6

7

06 : 56



2/10



7 min



Hint

Q : The oxidation of iso-propyl alcohol in the presence of acidified  $K_2Cr_2O_7$  gives

A

Propanal

B

Propanone

C

Propane

D

Butanone

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT

1

2

3

4

5

6

7

06 : 54



3/10



7 min



Hint

Q : 2-Methyl-2-propanol is an example of

A

Primary alcohol

B

Secondary alcohol

C

Tertiary alcohol

D

Dihydric alcohol

**SAEED MDCAT**

**SAEED MDCAT TEAM**



**SAEEDMDCAT**

1

2

3

4

5

6

7



06 : 52



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4/10



7 min



Hint

Q : Crotonaldehyde is an  $\alpha, \beta$ -unsaturated aldehyde formed from an aldol. The aldehyde which is the starting material in this reaction is

A

AcetalEthanal

B

Lactic acidMethanal

C

AldolPropanal

D

CyanohydrinButanal

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT

1

2

3

4

5

6

7

06 : 50



5/10



7 min



Hint

Q : Acetaldehyde when treated with "HCN" and followed by acidic hydrolysis gives

A

Acetal

B

Lactic acid

C

Aldol

D

Cyanohydrin

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT

1

2

3

4

5

6

7

06 : 48



6/10



7 min



Hint

Q :

Hydrogen cyanide adds to aldehyde and ketones to form cyanohydrin the reaction is carried out by adding slowly a mineral acid to an aqueous solution of sodium cyanide. The acid generates HCN from sodium cyanide in situ which means

A

Before reaction

B

After reaction

C

During reaction

D

At any time

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1

2

3

4

5

6

7

06 : 46



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7/10



7 min



Hint

Q:

Methyl ketones are usually characterized by

A

Tollen's tests

B

Lucas test

C

Iodoform test

D

Fehling solution test

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1

2

3

4

5

6

7



06 : 43



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8/10



7 min



Hint

Q : Which compound gives positive silver mirror test?

A

Propanone

B

Propanol

C

Propanal

D

Propanoic acid

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4

5

6

7

8

9

10

06 : 40



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9/10



7 min



Hint

Q:

Acetophenone is also called

A

Diphenyl ketone

B

Dimethyl ketone

C

Ethyl methyl ketone

D

Methyl phenyl ketone

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT

4

5

6

7

8

9

10

Q:

Among the following, \_\_\_\_\_ is NOT a structural derivative of water

☐ Alcohols

☐ Phenols

☐ Ethers

☒ Aldehydes

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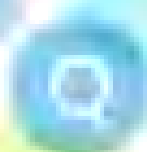
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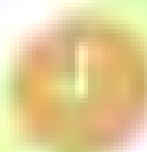


## QUIZ RESULT

Practice Test-1(Aldehydes and Ketones)



Q / 10



Time



0%



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SAEEDMDCAT







correct



1/10

Q : Ketones are prepared by the oxidation of:



Primary alcohols



Tertiary alcohols



Secondary alcohols



All of these

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Correct



2/10

Q : The oxidation of iso propyl alcohol in the presence of acidified  $K_2Cr_2O_7$  gives



Propanal



Propanone



Propane



Butanone

SAEED MDCAT

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correct



3/10

Q : 2 Methyl 2 propanol is an example of



Primary alcohol



Secondary alcohol



Tertiary alcohol



Dihydric alcohol

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SAEEDMDCAT



correct



4/10

Q : Crotonaldehyde is an  $\alpha, \beta$  unsaturated aldehyde formed from an aldol. The aldehyde which is the starting material in this reaction is



Acetaldehyde



Lactic acidMethanal



AldolPropanal



CyanohydrinButanal

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correct



5/10

Q : Acetaldehyde when treated with "HCN" and followed by acidic hydrolysis gives



Acetal



Lactic acid



Aldol



Cyanohydrin

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SAEEDMDCAT



Correct



Unattempted



Incorrect



6/10

Q:

Hydrogen cyanide adds to aldehyde and ketones to form cyanohydrin the reaction is carried out by adding slowly a mineral acid to an aqueous solution of sodium cyanide. The acid generates HCN from sodium cyanide in situ which means



Before reaction



After reaction



During reaction



At any time

SAEED MDCAT TEAM

Explanation



SAEEDMDCAT

Situ mean during reaction



correct



7/10

Q:

Methyl ketones are usually characterized by



Tollen's tests



Lucas test



Iodoform test



Fehling solution test

Explanation

SAEED MDCAT TEAM

$\alpha$ -methyl ketones gives iodoform reaction.



correct



8/10

Q : Which compound gives positive silver mirror test?



Propanone



Propanol



Propanal



Propanoic acid

Explanation

Aldehyde gives silver mirror test.



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correct



9/10

Q:

Acetophenone is also called



Diphenyl ketone



Dimethyl ketone



Ethyl methyl ketone



Methyl phenyl ketone

SAEED MDCAT TEAM



SAEEDMDCAT

Correct Answer: A

Question

Q:

Among the following, \_\_\_\_\_ is NOT a structural derivative of water

☐ Alcohols

☐ Phenols

☐ Ethers

☒ Aldehydes

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Explanation

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$$\text{R} - \overset{\text{O}}{\parallel}{\text{C}} - \text{H}$$
 is not structure similar to water

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## QUIZZES

Practice Test-2 (Aldehydes and Ketones)

10 Questions

1 hour

10 Marks

Start

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT

Q : Cannizzaro's reaction is not given by

- ☐ HCHO
- ☐  $\text{C}_6\text{H}_5\text{CHO}$
- ☐  $(\text{CH}_3)_3\text{C-CHO}$
- ☐  $\text{CH}_3\text{CHO}$

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT





Q : The least reactive carbonyl compound towards nucleophilic addition reactions is

- ☒ HCHO
- ☐ CH<sub>3</sub>CHO
- ☐ C<sub>2</sub>H<sub>5</sub>CHO
- ☐ CH<sub>3</sub>COCH<sub>3</sub>

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT

Q : In a base catalyzed reaction of carbonyl compounds the

- ☐ A Electrophilic character of the carbonyl carbon atom increases
- ☐ B Nucleophilic character of the reagent increases
- ☐ C Electrophilic character of the reagent increases
- ☒ D Nucleophilic character of the carbonyl carbon atom decreases

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT

Q : When acetaldehyde reacts with hydrazine in presence of an acid the product formed is

- ☐ Hydroxy acetaldehyde
- ☒ Acetaldehyde hydrazone
- ☐ Acetaldehyde oxime
- ☐ Acetaldehyde pheny hydrazone

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT

Q : All of the following can produce ketone except

- ☐ Secondary alcohol
- ☐ Propyne
- ☐ Calcium acetate
- ☐ Primary alcohol

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT

Q : Statement NOT true about reduction of acetone

- ☐ With  $\text{NaBH}_4$  it follows nucleophilic addition
- ☐ With  $\text{LiAlH}_4$  it gives propane
- ☐ It gives to propanol with  $\text{NaBH}_4$
- ☐ Can easily be reduced with  $\text{LiAlH}_4$

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT



Q : The acid(s) produced by the oxidation of butanone is/are

- ☐ Formic acid + propanoic acid
- ☒ Formic acid + Acetic acid
- ☐ Only propionic acid
- ☐ Only acetic acid

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT



Q:

Acetophenone cannot give

- ☐ Iodoform
- ☒ Cannizaro's reaction
- ☐ Aldol Condensation
- ☐ Sodium nitroprusside test

SAEED MDCAT

SAEED MDCAT TEAM

SAEEDMDCAT



Q:

Among the following, \_\_\_\_\_ is NOT a structural derivative of water



Alcohols



Phenols



Ethers



Aldehydes

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT



Q : Which pair of compounds cannot be distinguished by means of Tollen's test:

- ☐ HCHO &  $\text{CH}_3\text{COCH}_3$
- ☒ HCHO &  $\text{CH}_3\text{CHO}$
- ☐  $\text{CH}_3\text{CHO}$  &  $\text{CH}_3\text{COCH}_3$
- ☐  $\text{C}_6\text{H}_5\text{COCH}_3$  &  $\text{C}_6\text{H}_5\text{CHO}$

SAEED MDCAT

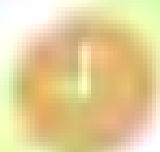
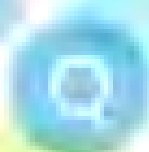
SAEED MDCAT TEAM

SAEEDMDCAT



## QUIZ RESULT

Practice Test-2(Aldehydes and Ketones)



Time



Score



C/10

0%

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT





correct



1/10

Q : Cannizzaro's reaction is not given by



HCHO



$C_6H_5CHO$



$(CH_3)_3C-CHO$



$CH_3CHO$

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT



correct



2/10

Q : The least reactive carbonyl compound towards nucleophilic addition reactions is



HCHO



CH<sub>3</sub>CHO



C<sub>2</sub>H<sub>5</sub>CHO



CH<sub>3</sub>COCH<sub>3</sub>

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT





Correct



Unattempted



Incorrect



3/10

Q : In a base catalyzed reaction of carbonyl compounds the



Electrophilic character of the carbonyl carbon atom increases



Nucleophilic character of the reagent increases



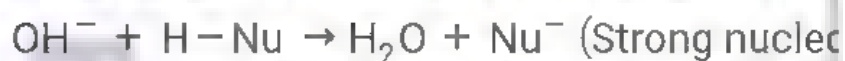
Electrophilic character of the reagent increases



Nucleophilic character of the carbonyl carbon atom decreases

Explanation

SAEED MD CAT TEAM



SAEEDMDCAT



correct



4/10

Q : When acetaldehyde reacts with hydrazine in presence of an acid the product formed is



Hydroxy acetaldehyde



Acetaldehyde hydrazone



Acetaldehyde oxime



Acetaldehyde pheny hydrazone

Explanation

SAEED MDCAT TEAM

Name of reactant + hydrazone



SAEEDMDCAT



correct



5/10

Q : All of the following can produce ketone except



Secondary alcohol



Propyne



Calcium acetate



Primary alcohol

Explanation

Primary alcohol gives aldehyde



SAEEDMDCAT



correct



6/10

Q : Statement NOT true about reduction of acetone



With  $\text{NaBH}_4$  it follows nucleophilic addition



With  $\text{LiAlH}_4$  it gives propane



It gives to propanol with  $\text{NaBH}_4$



Can easily be reduced with  $\text{LiAlH}_4$

Explanation

$\text{LiAlH}_4$  reduces carboxylic acid



SAEEDMDCAT



## Practice Test-2 (Aldehydes and Ketones)



Correct



Unattempted



Incorrect



7/10

Q : The acid(s) produced by the oxidation of butanone is/are

A

Formic acid + propanoic acid

B

Formic acid + Acetic acid

C

Only propionic acid

D

Only acetic acid

Explanation

SAEED MDCAT TEAM



SAEEDMDCAT



split on oxidation  
with smaller chain

group remain attached

4

5

6

7

8

9

10



## Practice Test-2 (Aldehydes and Ketones)



Correct



Unattempted



Incorrect



8/10

Q:

Acetophenone cannot give

A

Iodoform

B

Cannizaro's reaction

C

Aldol Condensation

D

Sodium nitroprusside test

Explanation

Acetophenone has  $\alpha$ -hydrogen and  $\alpha$ -methyl group

4

5

6

7

8

9

10





## Practice Test-2 (Aldehydes and Ketones)



Correct



Unattempted



Incorrect



9/10

Q:

Among the following, \_\_\_\_\_ is NOT a structural derivative of water

A

Alcohols

B

Phenols

C

Ethers

D

Aldehydes

Explanation



is not structure similar to water

4

5

6

7

8

9

10



## Practice Test-2 (Aldehydes and Ketones)



Correct



Unattempted



Incorrect



10/10

Q : Which pair of compounds cannot be distinguished by means of Tollen's test:



A  $\text{HCHO}$  &  $\text{CH}_3\text{COCH}_3$



B  $\text{HCHO}$  &  $\text{CH}_3\text{CHO}$



C  $\text{CH}_3\text{CHO}$  &  $\text{CH}_3\text{COCH}_3$



D  $\text{C}_6\text{H}_5\text{COCH}_3$  &  $\text{C}_6\text{H}_5\text{CHO}$

Explanation

$\text{HCHO}$  and  $\text{CH}_3\text{CHO}$  both give silver mirror so cannot be distinguished.